



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/811,387	03/20/2001	Masayuki Miyazaki	500.39910x00	4078

20457 7590 08/11/2003

ANTONELLI, TERRY, STOUT & KRAUS, LLP
1300 NORTH SEVENTEENTH STREET
SUITE 1800
ARLINGTON, VA 22209-9889

EXAMINER

WELLS, KENNETH B

ART UNIT	PAPER NUMBER
----------	--------------

2816

DATE MAILED: 08/11/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/811,387

Applicant(s)

MIYAZAKI ET AL.

Examiner

Kenneth B. Wells

Art Unit

2816

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11 June 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 17-30 and 36-38 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 19, 22, 25 and 26 is/are allowed.
- 6) ☒ Claim(s) 17, 18, 20, 21, 23, 24, 27-30 and 36-38 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

Art Unit: 2816

1. The amendment and RCE request filed on 6/11/03 have now been entered in the case.

2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

3. The claims are objected to because of the following informalities: there are numerous grammatical errors in the claims, all of which should be removed in response to this office action. For example, on the second to last line of claim 17, the word "are" should be changed to --is--. Also, in claim 25, the period in the middle of the claim should be deleted. Appropriate correction is required.

4. Claims 36-38 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The recitation "one from combinations of at least two" makes no sense. What is applicant trying to claim here? How is this different from what is set forth in the previous claims?

Art Unit: 2816

5. Claims 17, 18, 20, 21, 23, 24, 27-30 and 36-38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mizuno et al.

This reference teaches changing the frequency of a clock signal supplied to first circuit of an IC in response to the first circuit changing its operating state (see, e.g., column 3, lines 45-50); and also changing the voltage applied to a substrate of the transistors of the first circuit in response to the first circuit changing its operating state (discussed throughout Mizuno as the change in the threshold voltage).

Not disclosed by Mizuno et al is changing the supply voltage in response to the first circuit changing its operating state, but such would have been obvious to those having ordinary skill in the art who know that it is common to lower the Vcc voltage when the IC has been idle for a while, and since Mizuno et al already teaches monitoring for such an idle condition (see, e.g., column 3, lines 45-50), the lowering of Vcc during an idle condition does not represent a patentable distinction over Mizuno et al. The claims reciting the use of command signals from command decoders for controlling the clock frequency, the substrate bias and the level of the power supply voltage are also unpatentable because the use of such decoders for outputting any type of control signal is an old and well-known concept and those

Art Unit: 2816

having ordinary skill in the art will know that such can be used to generate the (inherent) control signals needed to control the clock frequency, the substrate bias and the level of the power supply voltage.

Making the command decoder, second circuit or third circuit on a chip separate from the first circuit also would have been obvious since this is also well-known in the art, for various advantages (e.g., being able to remove one circuit from a system and replacing it, while leaving the other circuits in place, a common technique in the art of semiconductor circuitry.

As to claim 28, the specific bulk bias voltage recited also fails to define patentably over the above-noted combination because those having ordinary skill in the art know that a FET typically has its substrate held in the region between forward and reverse bias levels, of which fact official notice is taken. The motivation for this is simply to obtain stable operation of the on/off switching of the transistor.

As to claims 29 and 30, the recited FET layout structure is old and well-known in the art as well and thus similarly does not distinguish patentably over the applied prior art combination.

6. Claims 19, 22, 25 and 26 are allowed.

Art Unit: 2816

7. Applicant's arguments filed on 6/11/03 have been fully considered but they are not persuasive.

The argument that "the invention defined by claim 17 and 25 operates completely differently than the operation which would occur in Mizuno" is not persuasive because it is irrelevant, i.e., only claimed differences can be relied upon to distinguish over the applied prior art, and no claimed limitations are seen to do this for claim 17.

The next argument is that the claimed "control of both supply voltage and substrate voltage, in combination with control of the frequency, to provide both improved operating speed and power consumption, is completely lacking in Mizuno" (emphasis in original). This argument makes no sense because the rejection is under 35 USC 103, not 102 (i.e., the examiner explicitly noted that not all three operations are disclosed by Mizuno, and therefore set forth an obviousness-type rejection, see paragraph five, supra. The argument that hindsight was used by the examiner is not supported by a simple analysis of the rejection and the teachings of the prior art. It is suggested that applicant review Mizuno again carefully. The reference clearly discloses that the frequency of the clock signal is adjusted for the purpose of changing the operating speed of the circuitry, and

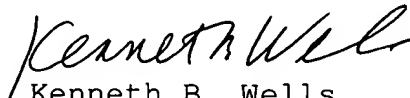
Art Unit: 2816

that the substrate bias voltage is adjusted in order to control power consumption.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kenneth B. Wells whose telephone number is 703-308-4809. The examiner can normally be reached on Monday through Friday from 7:30am to 4:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Timothy P. Callahan, can be reached at 703-308-4876. The fax phone numbers for TC2800 are 703-872-9318 (before final) and 703-872-9319 (after final).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is 703-308-0956.


Kenneth B. Wells
Primary Examiner
Art Unit 2816

August 8, 2003